

20-6-31/42

Recent Vertical Motion of the Shores of the Far East Seas.

of motion have been observed. By the differences of the height of the old shore quays the authors conclude that the velocity of the relative sinking of the Western-Kamchatka shore exceed that one of the Eastern part of the Chukot-Peninsula by the 3 - to 4 -fold. The definition of absolute velocities just is impossible because of the deficiency of proofs. There are 3 figures, and 12 Slavic references.

ASSOCIATION: Institute for Oceanology AN USSR (Institut okeanologii Akademii nauk SSSR).

PRESENTED: June 12, 1957, by A. A. Grigor'yev, Academician.

SUBMITTED: June 11, 1957.

AVAILABLE: Library of Congress.

Card 3/3

SOV-26-58-3-21/51

AUTHOR: Kaplin, P.A., Candidate of Geographical Sciences

TITLE: The Retreat of the Glaciers of Novaya Zemlya (Otstupleniye lednikov Novoy Zemli)

PERIODICAL: Priroda, 1958⁴⁷, Nr 3, pp 88-90 (USSR)

ABSTRACT: According to P.A. Shumskiy, 22,600 square km of ice covers the interior of Novaya Zemlya. This ice shield sends forth glacier tongues through the valleys and into the sea thus filling in deep bays of the fjord type. A comparison of the coast contour lines of Novaya Zemlya in 1933 and 1952 shows that in 1933 there were hardly any fjords in the northwest part of the island as was stated by A.A. Kurayev. In 1952, the author found out that several fjords were laid bare by the retreat of glacier. Thus the Inostrantsev Glacier had retreated 8 km within 19 years which equals to a mean retreat speed of 420 m a year. By 1955 it had gone back by 2 more km. Brown Glacier retreated 5 km in the past 19 years, as did the glacier falling into the Nordenshel'd Bay. All these glaciers produce icebergs. They do not exceed 10 to 16 m in height above sea surface and 25 to 30 m beneath. M.M. Yermolayev states that the lower face of

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The Retreat of the Glaciers of Novaya Zemlya

SOV-26-58-3-21/51

the glaciers is below the present sea level in a 15 km wide zone. He and P.A. Shumskiy suggest that a strait under the ice shield divides the island along a line leading from Chayev Bay to Blagopoluchiye Bay. The retreat of the glaciers corresponds to the general warming of Arctic temperature, especially of the coastal waters, together with a decrease of glaciation in these waters. On the other hand, the area of Shokal'skiy Glacier in Russkaya Gavan' has remained unchanged since 1933. These and other glaciation phenomena are being studied at present on Novaya Zemlya as part of the IGY. There is 1 photograph, 2 charts and 4 Soviet references.

ASSOCIATION: Institut okeanologii AN SSSR-Moskva (Institute of Oceanology of the AS USSR-Moscow)

1. Glaciers--USSR

Card 2/2

KAPLIN, P.A.

Evolution of the shore line in fjord regions. Trudy Okean.kom. 4:
54-65 '59. (MIRA 13:4)

1. Moskovskiy gosudarstvennyy universitet.
(Fjords) (Shore lines)

KAPLIN, P.A.

Origin of fjords and the fjord coasts in the U.S.S.R. Vop. geog.
no.46:204-220 '59. (MIRA 12:12)
(Fjords)

KAPLIN, P. A.

"The Fjord Seashores of the USSR."

report to be submitted for the Intl. Geographical Union, 10th General Assembly and
19th Intl. Geographical Congress, Stockholm, Sweden, 6-13 August 1960.

KOSHELEVSKIY, D.I., red.; KURAZHKOVSKAYA, Ye.A., red.; PLATONOV, G.V.,
red.; SOLOV'YEV, A.I., red.; KHAIN, V.Ye., red.; KAPLIN, P.A.,
red.; CHISTYAKOVA, K.S., tekhn.red.

[Philosophical problems of natural science] Filosofskie voprosy
estestvoznaniia. Moskva, Izd-vo Mosk.univ. Vol.3. [Geological
and geographical sciences] Geologo-geograficheskie nauki. 1960.
468 p. (MIRA 13:19)

(Geology)

(Geography)

KAPLIN, P. A.

80V/5331

PHASE I BOOK EXPLOITATION:

International Geological Congress. 21st, Copenhagen, 1960. *Morskaya Geologiya (Marine Geology)* Moscow, IZD-vo AN SSSR, 1960. 265 p. 2,500 copies printed. (Series: Doklady sovetskikh geologov, problems 10)

Editorial Board: P. L. Bezrukov, Resp. Ed.; A. V. Zhivunco, V. P. Zerkovich and G. B. Udintsev; Ed. of Publishing House: V. S. Sheynman; Tech. Ed.: V. Karpov.

PURPOSE: This book is intended for geologists and oceanographers.

COVERAGE: The book contains 18 articles representing the reports given by Soviet geologists at the 21st. International Geological Congress. Individual articles deal with the bottom geology, sediments, and tectonics of oceans (western Pacific, Indian, Southern Indian), as well as the geomorphology and tectonics of the Black and Caspian Seas, and Soviet sectors of the Baltic. An English résumé accompanies each article. No personalities

Sinitsyn, N. E., I. Ye. Mikhailitsky, G. B. Udintsov, I. B. Andreyev, and P. K. Kozlov, and Yu. I. Neprochnov. Results of Scientific and Geologic Investigations of the Earth's Crust Under Seas and Oceans	35
Saidova, Kh. M. Stratigraphy of Sediments and the Paleogeography of the Northwestern Pacific and the Far Eastern Seas of the USSR According to Sea-Bottom Foraminifers	59
Maslenn, A. P. Formation of Sediments in the Southern Pacific and Indian Oceans	69
Lapina, N. M., and N. A. Bolov. Bottom Sedimentation Conditions in the Arctic Ocean	88
Godcharov, V. P., and M. P. Neprochnov. Bottom Geomorphology and Tectonic Problems of the Black Sea	94
Moloyev, V. P., L. S. Kulakova, and G. V. Agapova. Relief and Recent Floor Structure of the Southern Caspian Sea	105
Gershonovich, D. Ye. Recent Shelf Deposits in the Marginal Seas of Northeast Asia	116
Klenova, K. V. The Geology of the Barents Sea	123
Gorshkova, T. I. Sediments in the Norwegian Sea	132
Tagirova, N. V. Study of the Diagenesis of Some Marine Sediments	140
Zenkovich, V. P., O. K. Leont'yev, and Ye. M. Neveskiy. The Influence of the Subarctic and Arctic Transgression on the Development of the Coastal Zone of Soviet Seas	154
Apykhatov, N. A., V. V. Boldyrev, and V. P. Zenkovich. Some New Data on Sediment Streams Along Shores	164
Budanov, V. I., A. S. Iomin, P. A. Kaplin, and V. S. Medvedev. Recent Vertical Movements of Seashores in the Soviet Union	175
Leont'yev, O. K. Types and Formation of Lagoons on Recent Seashores	188

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23

POPOV, B.A.; IONIN, A.S.; KAPLIN, P.A.

Concerning R.IA.Knaps's critical notes on analytical investigation
of the formation of marine terraces. Biul. Okean. kom. no.5:79-86
'60. (MIRA 13:10)

1. Institut okeanologii AN SSSR.
(Seashore)

(Knaps, R.IA.)

KAPLIN, P.A., kand.geograf.nauk, nauchnyy sotrudnik

Submarine geologists. Tekh.mol. 28 no.8:22 '60. (MIRA 13:9)

1. Institut okeanologii AN SSSR.
(Diving, Submarine)

(Submarine geology)

KAPLIN, P.A.; IONIN, A.S.

Methods for geological and geomorphological underwater exploration.
Izv. AN SSSR. Ser. geol. 25 no.11:105-112 N '60. (MIRA 13:11)

1. Institut okeanologii AN SSSR, Moskva.
(Submarine geology)

KAPLIN, P.A.

Exploration of the tops of submarine canyons by divers. Okeanologiya
1 no.6:1034-1038 '61. (MIRA 15:1)

1. Institut okeanologii AN SSSR.
(Black Sea--Submarine topography)

KAPLIN, P.A.; NEVESSKIY, Ye.N.

Height of Quaternary marine terraces of Sudakskaya Bay. Trudy Okean.
kom. 8:60-64 '61. (MIRA 14:5)

1. Institut okeanologii AN SSSR.
(Sudakskaya Bay---Terraces (Geology))

KAPLIN, P.A.; BOLDYREV, V.L.

Joint Polish-Soviet exploration of the Baltic Coast in 1958.
Trudy Okean.kom. 8:245-250 '61. (MIRA 14:5)

1. Institut okeanologii AN SSSR.
(Baltic Sea--Coasts)

S/519/61/000/009/001/001
H000/H000

AUTHORS: Kaplin, P. A., and A. S. Ionin

TITLE: Some coastal relief features of the Kurile-Kamchatka region
in relation to tsunami problems

SOURCE: Akademiya nauk SSSR. Soviet po seismologii. Byulleten'.
Problemy tsunami, no. 9, 1961, 74-88

TEXT: The Kurile-Kamchatka area, which lies parallel to a line of
epicenters known to cause tsunamis, is schematized and regionalized
on the basis of available literature according to its susceptibility
to tsunamis. The severity of a tsunami in a given coastal area de-
pends not only on intensity of the quake causing the tsunami, para-
meters of the initial wave, and distance from the epicenter, but
also on submarine and surface coastal relief characteristics and
configuration of the shoreline. Tsunami wave height at the coast
depends specifically on 1) exposure of coast line, 2) surface features
and bottom relief of embayments (fiords, craters, etc.), 3) pre-

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S/519/61/000/009/001/001
H000/H000

coast, suffer the heaviest destruction from tsunamis. Shoal water offshore increases the destructive effect still further. The destructive effect on abrasion-denuded coastline is directly related to the distance the shallow abrasion terrace extends out into the water and to the presence or absence of low abraded or aggraded terraces bordering the coastal shelf. A shallow abraded terrace extending a sufficient distance offshore will dissipate tsunami waves so that they will not reach the brow of the low terrace. Volcanic coastlines and abrasion-denuded coastlines having a high coastal terrace are almost entirely safe from danger of tsunami destruction, while the shores of crater bays and narrow-mouth bays of the Avachinskaya bay type are not subject to the effects of tsunamis. There are three figures, including the map. There are 2 English-language references, which read as follows: Imamura, A., "Theoretical and applied seismology", Maruzen, Tokyo, 1937; Shepard, F. P., G. A. Macdonald, and D. C. Cox, "The tsunami of April 1, 1946", Bull. of the Scripps Univ. of Calif. Press, v. 5, no. 6, 1950.

Card 3/3

IONIN, A.S.; KAPLIN, P.A.; MEDVEDEV, V.S.

Classification of global coast types (as applied to maps of the
physicogeographical atlas of the world). Trudy Okean.kom. 12:
94-108 '61. (MIRA 15:1)

1. Institut okeanologii AN SSSR.
(Coasts)

IONIN, A.S.; KAPLIN, P.A.; MEDVEDEV, V.S.

Some results of regional investigations of seashores in the Soviet
Union. Trudy Inst. okean. 48:3-33 '61. (MIRA 15:1)
(Coasts)

KAPLIN, P.A., kand.geograficheskikh nauk

The earth's fjords. Priroda 50 no.6:82-85 Je '61. (MIRA 14:5)

1. Institut okeanologii AN SSSR, Moskva.
(Fjords)

KAPLIN, Pavel Alekseyevich; ZENKOVICH, V.P., otv. red.; TIKHOMIROV,
V.N., red. izd-va; POLYAKOVA, T.V., tekhn. red.

[Fjorved coasts of the Soviet Union] Fiordovye poberezh'ia So-
vetskogo Soiuz'a. Moskva, Izd-vo Akad. nauk SSSR, 1962. 187 p.
(MIRA 15:7)

(Fjords)

GLAZOVSKAYA, M.A., prof., red.; RAKITNIKOV, A.N., dots., red.;
KAPLIN, P.A., red.; BELYAKOVA, Ye.V., red. izd-va;
LAZAREVA, L.V., tekhn. red.

[Nature and agriculture in the Volga-Akhtuba Flood Plain and
Volga Delta] Priroda i sel'skoe khoziaistvo Volgo-
Akhtubinskoi doliny i del'ty Volgi; trudy. Moskva, Izd-vo
Mosk. univ., 1962. 448 p. (MIRA 15:4)

1. Prikaspiyskaya ekspeditsiya.
(Volga-Akhtuba Flood Plain--Agriculture)
(Volga Delta--Agriculture)

KAPLIN, Pavel Aleksyevich; ZENKOVICH, V.P., prof., nauchnyy red.;
DESHKOV, S.I., red.; RAKITIN, I.T., tekhn. red.

[Submarine geology] Podvodnaia geologia. Pod nauchn. red.
V.P.Zenkovicha. Moskva, Izd-vo "Znanie," 1963. 45 p.
(Novoe v zhizni, nauke, tekhnike. XII Seriya: Geologia i
geografiia, no.9) (MIRA 16:5)
(Submarine geology)

IONIN, A.S.; KAPLIN, P.A.; MEDVEDEV, V.S.

Submarine geomorphological studies in the U.S.S.R. Vest. Mosk. un.
Ser. 5: Geog. 18 no.3:17-23 My-Je '63. (MIRA 16:6)

1. Institut okeanologii AN SSSR.
(Submarine topography)

KAPLIN, P. A.

Submarine Investigations in the Near-shore Zone of the Seas

report submitted for the 13th General Assembly IUGG, (Oceanography) Berkeley,
California, 19-31 Aug 63

IONIN, A.S.; KAPLIN, P.A.; MEDVEDEV, V.S.

O.K. Leont'ev's book "Fundamentals of seashore geomorphology."
Okeanologia 3 no.5:946-948 '63. (MIRA 16:11)

KAPLIN, F.A.

Some characteristics of the formation of lagoons. Okeanologia
4 no.2:290-294 '64. (MIRA 17:5)

1. Institut okeanologii AN SSSR.

ZENKOVICH, V.P.; KAPLIN, P.A.

Submarine geomorphological explorations on the Dalmatian seashore.
Izv. AN SSSR. Ser. geog. no.3:18-34 My-Je '65.

(MIRA 18:6)

1. Institut okeanologii AN SSSR.

AFANAS'YEV, N.A.; KAPLIN, P.N.; ORGIN, S.P.; PIGOLEV, S.V.;
PROKOF'YEV, P.S.; AVRUSHCHENKO, R.A., red. izd-va;
LELYUKHIN, A.A., tekhn. red.

[Textbook for the training of volunteer fire brigades of
industrial enterprises] Posobie po podgotovke dobrovol'-
nykh pozharnykh druzhin promyshlennykh predpriatii. Moskva,
Izd-vo M-va kommun.khoz.RSFSR, 1959. 232 p. (MIRA 16:7)
(Firemen--Education and training)
(Factories--Fires and fire prevention)

PEREKALIN, Vsevolod Vasil'yevich; Primali uchastiye: SOPOVA, A.V.; LERNER, O.M.; ZONIS, E.S.; ZOBACHEVA, M.M.; KVITKO, S.M.; BASKOV, Yu.V.; KAP-LIN, S.V.; POLYANSKAYA, A.S.; PADVA, G.D.; ZONIS, S.A., red.; FOMKINA, T.A., tekhn. red.

[Unsaturated nitro compounds] Nepredel'nye nitrosoedineniia. Lenin-grad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1961. 335 p.

(MIRA 14:7)

(Nitro compounds)

KAPLIN, S., polkovnik, kand.istoricheskikh nauk

Irreconcilability to the enemies of communism. Komm.Voeruzh.Sil
3 no.19:44-48 0 '62. (MIRA 15:9)

(World politics)

(United States--Military policy)

L 47453-66 EWT(d)/EWT(m)/EWF(f)/T DJ

ACC NR: AP6030625

(A)

SOURCE CODE: UR/0413/66/000/016/0121/0121

INVENTOR: Kaplin, V. F.; Dragun, A. S.

43

ORG: none

B

TITLE: Air filter for internal combustion engines. Class 46, No. 185151 ²³ announced by Melitopol' Engine Plant (Melitopol'skiy motornyy zavod)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 121

TOPIC TAGS: internal combustion engine, air filter, *industrial filter*

ABSTRACT: This Author Certificate introduces an air-filter for internal combustion engines, consisting of a cylindrical housing which contains a central suction pipe, an oil bath, sediment collector, a filtering element and an outlet. To produce cleaner air at all rates of engine operation, an oil collector with a spring-supported movable diaphragm and an outlet are installed in the upper part of the oil bath, forming uniform-sized channels with the suction pipe and variable-sized channels with the diaphragm. Orig. art. has: 1 figure. [SA]

SUB CODE: 21, 13/ SUBM DATE: 26Apr65

Card 1/1 *egfe*

UDC: 621.43.038.771

YURENO, V.S.; YILGNOV, K.O.; KAPLIN, V.M.

Berguzin State Preserve. Okhr. priro. Sib. i Dal'. Vost.
no.1:187-192 '62. (MIRA 17:5)

KAPLIN, V.N.

Remote results of streptomycin therapy of tuberculous meningitis in children. *Pediatrics* no.5:61-63 S-0 '54. (MLRA 7:12)

1. Iz kafedry detskikh bolezney (sav. prof. P.I.Pichugin [deceased])
Molotovskogo meditsinskogo instituta i detskoy klinicheskoy bol'nitsy
Leninskogo rayona g.Molotova (glavnyy vrach M.I.Podergina)

(STREPTOMYCIN, therapeutic use,

tuberc., meningeal, in child.)

(TUBERCULOSIS, MENINGEAL, in infant and child,
ther., streptomycin)

KAPLIN, V.N.

Studies on the phagocytic reaction of leukocytes and its humoral stimulation by the introduction of tuberculosis antigens. Biul. eksp. biol. i med. 58 no.7:63-66 J1 '64. (MIRA 18:2)

1. Kafedra patologicheskoy fiziologii (zav. - dotsent R.B. TSynkalovskiy) Permskogo meditsinskogo instituta. Submitted July 23, 1963.

KAPLIN, V. P., POZDNIKOV, V. N., and ZHABUNIN, A. S.

"On the Possibility of Automatic Separation of Potato Tubers
From Lumps of Soil in Potato Harvesting Machines"

paper presented at the All-Union Seminar on the Application of
Radioactive Isotopes in Measurements and Instrument Building,
Frunze (Kirgiz SSR), June 1961)

So: Atomnaya Energiya, Vol 11, No 5, Nov 61, pp 468-470

KAPLIN, V.S., inzh.

Electric heating of precast reinforced concrete. Bet. 1 zhel.-bet.
8 no.3:115-118 Mr '62. (MIRA 15:3)
(Precast concrete--Curing)

5(3)

AUTHORS:

Kaplin, V. T., Datsko, V. G.

SOV/62-59-9-28/40

TITLE:

Extraction of Indophenol From Aqueous Solutions by Means of Organic Solvents

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1673-1674 (USSR)

ABSTRACT:

Hitherto, it was not possible to extract indophenol dyes, formed by sodium hypobromite and ammonium salts in the presence of phenol, with organic solvents. However, this would be of importance for the determination of ammonium nitrogen. For this reason the authors investigated a considerable number of organic solvents as possible mediums for the extraction of indophenol dyes from the highly basic aqueous solutions in which the phenolate - hypobromite reaction takes place. Only negative results were obtained in these tests. On acidifying the basic solutions, extraction with these solvents became possible. The following solvents were investigated: Ethyl ether, acetoacetic acid ester, methyl ethyl ketone, dichloroethane, n-butyl-, isobutyl-, isoamyl alcohol, and chloroform. The optimum conditions determined for n-butyl alcohol are described (Table 1). Chloroform enables

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Extraction of Indophenol From Aqueous Solutions by
Means of Organic Solvents

SOV/62-59-9-28/40

maximum extraction in a wider pH range than butyl alcohol. The only disadvantage of the chloroform method is the somewhat weak color of the solution. Data concerning the investigation of the optical density in dependence of the ammonia concentration are given in table 2. There are 2 tables and 6 references, 3 of which are Soviet.

ASSOCIATION: Hidrokhimicheskiy institut Akademii nauk SSSR (Institute of Hydrochemistry of the Academy of Sciences, USSR)

SUBMITTED: February 20, 1959

Card 2/2

5(2)

SOV/62-59-9-3/40

AUTHORS:

Kaplin, V. T., Semenov, A. D., Datsko, V. G.

TITLE:

Trial to Combustion Rapidly the Organic Substance in Detecting Phosphorus and Nitrogen in Natural Waters

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1526-1528 (USSR)

ABSTRACT:

To accelerate the combustion of organic substances in natural water by applying sulfuric acid, which may last up to 130 hours, the authors used potassium chlorate with good success. The time necessary for the detection was reduced to 1 - 1.5 hours, but the method made necessary an additional treatment of the water to eliminate the influence of the oxidant residues on the result of analysis. The additional treatment is especially necessary for the detection of nitrogen. For phosphorus detection it is the following: 100 ml of sample, 2 ml of sulfuric acid and 1 ml of 5% potassium chlorate solution are boiled until the appearance of SO₂ smoke, subsequently a return-flow cooler is attached and boiling goes on for another hour. All organic compounds are completely destroyed in the course of this process.

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SOV/62-59-9-3/40

Trial to Combustion Rapidly the Organic Substance in Detecting Phosphorus and Nitrogen in Natural Waters

The excess potassium chlorate is decomposed by sodium sulfite and continued boiling, the SO_2 is then evaporated and the precipitate is investigated for phosphorus by the conventional method. Table 1 lists the analysis results of water from Don and Volga, the Tsimlyanskoye reservoir, the Azov Sea and the Taganrog Bay. For detecting nitrogen the reagents had to be very precisely measured-in. Otherwise the decomposition process is the same. Table 2 shows the results. There are 2 tables and 8 references, 3 of which are Soviet.

ASSOCIATION: Hidrokhimicheskiy institut Akademii nauk SSSR (Hydrochemical Institute of the Academy of Sciences, USSR)

SUBMITTED: March 8, 1958

Card 2/2

DATSKO, V.G.; KAPLIN, V.T.

Using the phenolate - hypobromite reaction for ammonia determining
the latter in natural waters. *Gidrokhim.mat.* 29:230-237
'59. (MIRA 13:5)

1. *Gidrokhimicheskiy institut Akademii nauk SSSR, Novocherkassk.*
(Water--Analysis) (Ammonia)

KAPLIN, V. T., Cand Chem Sci -- (diss) "Use of extraction in the determination of volatile phenols, organic and ammoniacal nitrogen in reservoirs clogged with drainage waters." Novocherkassk, 1960. 15 pp; (Academy of Sciences USSR, Hydrochemical Inst); number of copies not given; free; list of author's work on pp 14-15 (11 entries); (KL, 27-60, 149)

KAPLIN, V.T.; FESSENKO, H.G.

Rapid method of determining ammonium ions in the waste water
from the manufacture of by-product coking plants. Koks i
khim. no.5:49-50 '60. (MIRA 13:7)

1. Gidrokhimicheskiy institut AN SSSR.
(Sewage--Analysis) (Ammonium salts)
(Coke industry--By-products)

KAPLIN, V.T., starshiy laborant; FESENKO, N.G., starshiy nauchnyy sotrudnik,
kandidat khimicheskikh nauk

Quantitative determination of phenols in natural reservoirs when
their content is 0.001 mg. per liter and higher. Gig.i san. 25
no.8:41-43 Ag '60. (MIRA 13:11)

1. Iz Gidrokhimicheskogo instituta AN SSSR.
(WATER ANALYSIS) (PHENOLS)

KAPLIN, V.T.; DATSKO, V.G.

Method of fast determination of organic nitrogen in natural
waters. *Gidrokhim. mat.* 31:197-203 '61. (MIRA 14:3)

1. *Gidrokhimicheskiy institut Akademii nauk SSSR, g. Novocherkassk.*
(Water--Analysis) (Nitrogen)

KAPLIN, V.T.

Determination of ammonium ions in colored and turbid natural waters.
Gidrokhim. mat. 32:148-152 '61. (MIRA 14:6)

1. Gidrokhimicheskiy institut AN SSSR, Novocherkassk.
(Water—Analysis)
(Ammonia)

BABESHKINA, Z.M.; KAPLIN, V.T.; FESENKO, N.G.

Colorimetric determination of phenols in water.
35:207-217 '63.

Gidrokhim. mat.
(MIRA 16:7)

1. Gidrokhimicheskiy institut, Novochoerkassk.
(Water--Composition) (Phenols)

KAPLIN, V.I.; SOLOKHIN, G.A.; PRSENKO, H.G.

Character of the water pollution of the Volgograd Reservoir
within Saratov Province under flood conditions. *Gidrokhim.*
mat. 37:144-147 '64. (MIRA 18:4)

1. *Gidrokhimicheskiy institut Glavnogo upravleniya gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR, Novocheerkassk.*

KAPLIN, V.V.; NASHATYR', V.M.

Testing high-voltage current limiters for arresters on an oscillating circuit. Elektrichestvo 8:74-75 Ag '57. (MLRA 10:9)
(Lightning protection)

RAZUVAYEV, G.A.; PETUKHOV, G.G.; KAPLIN, Yu.A.

Reactions of diphenylmercury with benzene. Dokl. AN SSSR 135
no.2:342-345 N '60. (MIRA 13:11)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom
gosudarstvennom universitete im.N.I.Lobachevskogo. 2. Chlen-
korrespondent AN SSSR (for Razuvayev).
(Mercury) (Benzene)

RAZUVAYEV, G.A.; PETUKHOV, G.G.; KAPLIN, Yu.A.; DRUZHKOV, O.N.

Reactions of organomercury and organolead compounds studied by the isotopic and mass-spectrometric method. Dokl. AN SSSR 152 no.5: 1122-1125 0 '63. (MIRA 16:12)

1. Chlen-korrespondent AN SSSR (for Razuvayev).

RAZUVAYEV, G.A.; PETUKHOV, G.G.; KAPLIN, Yu.A.; KUDRYAVTSEV, L.F.

Decomposition of diphenylmercury in cyclohexane and cyclohexene.
Dokl. AN SSSR 141 no.2:371-373 N '61. (MIRA 14:11)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom
gosudarstvennom universitete im. N.I.Lobachevskogo.
(Mercury) (Cyclohexane) (Cyclohexene)

RAZUVAYEV, G.A.; MITROFANOVA, Ye.V.; KAPLIN, Yu.A.

Exchange reaction between triphenylaluminum and benzene.
Zhur.ob.khim. 32 no.10:3453 0 '62. (MIRA 15:11)
(Aluminum) (Benzene)

RAZUVAYEV, G.A.; PETUKHOV, G.G.; KAPLIN, Yu.A.

Reactions of tetraphenyllead and hexaphenyldip^lumbane with benzene.
Zhur.ob.khim. 33 no.7:2394-2397 J1 '63. (MIRA 16:8)
(Lead) (Benzene)

RAZUVAYEV, G.A.; KAPLIN, Yu.A.; MITROFANOVA, Ye.V.

Reactions of phenyl compounds of III group elements with benzene.
Izv. AN SSSR. Ser. khim. no.8:1489-1491 '65. (MIRA 18:9)

1. Nauchno-issledovatel'skiy institut khimii Gor'kovskogo
gosudarstvennogo universiteta im. N.I. Lobachevskogo.

GORGIYEV, F.B.; KRASNOVA, V.G.; YARTSEVA, I.M.; KHODOS, A.D.; ESTRIN, B.M.;
RUKAVITSA, T.Z.; KAPLINA, A.N.

Characteristics of the postepidemic period of influenza A2. Zhur.
mikrobiol. epid. i immun. 31 no. 10:65-71 0 '60. (MIRA 13:12)

1. Iz Dnepropetrovskogo instituta epidemiologii, mikrobiologii i
gigiyeny imeni Gamalei i Dnepropetrovskoy gorodskoy sanitarno-
epidemiologicheskoy stantsii.

(INFLUENZA)

GANCHEL', F.F., otv.red.; GERBACHEVSKIY, A.F., zasluzhennyy vrach USSR, red.; KAPLINA, A.V., zasluzhennyy vrach USSR, red.; KRASNOMOVETS, V.N., red.; PAVSHA, G.F., zasluzhennyy vrach USSR, red.; KHOLOPTSEVA, Z.I., red.; SNEZHIN, M.I., red.; KOPEYCHIK, P.N., tekhn.red.

[Research articles by physicians of Zhitomir Province, Ukrainian S.S.R.] Nauchnye trudy vrachei Zhitomirskoi oblasti Ukrainskoi SSR. Zhitomir, 1959. 255 p.
(MIRA 14:2)

1. Zhitomirskiy oblastnoy otdel zdravookhraneniya. 2. Zaveduyushchiy Zhitomirskim oblzdarvotdelom (for Ganchel'). 3. Zhitomirskaya oblastnaya bol'nitsa (for Gerbachevskiy, Kaplina, Krasnomovets, Pavsha).

(MEDICINE)

KOZHOV, M.M.; IZHBOLDINA, L.A.; KAPLINA, G.S.; SHAPOVALOVA, I.M.;
CHERENKOVA, V.I.

Littoral and sublittoral benthos of Lake Baikal along the
southeastern shore. *Gidrobiol. zhur.* 1 no.4:3-11 '65.
(MIRA 18:10)

1. Baykal'skaya biologicheskaya stantsiya Irkutskogo
gosudarstvennogo universiteta.

KAPLINA, G.T., kandidat sel'skokhozyaystvennykh nauk, redaktor; GUSEVA, N.P.,
redaktor; ZLOBIN, M.V., tekhnicheskiy redaktor

[Kazakhstan vegetable grower's manual] Agrotekhnicheskiy spravochnik
ovoshchevoda Kazakhstana. Alma-Ata, Kazakhskoe gos. izd-vo 1956.
331 p. (MLRA 9:10)

(Kazakhstan--Vegetable gardening)

CHURIN, Kh.D., kand. sel'khoz. nauk, dots.; VASIL'YEV, B.M., dots.;
BELOV, A.I., kand. ekon. nauk; ASHIRYAYEV, Sh.V., dots.;
TSYPKIN, G.I., kand. sel'khoz. nauk; KAPLINA, G.T., dots.;
ANDRONOV, I.G., dots.; VASIL'YEV, V.I.; KONDION, A.K.,;
MAKAROV, A.P., nauchnyy sotr.; ZHIZNEVSKIY, F.V., red.;
MOSIYASH, S.P., red.; KRINITSKIY, V.A., red.; NAGIBIN, P.,
tekh. red.

[Economics of Kazakhstan agriculture] Ekonomika sel'skogo kho-
ziaistva Kazakhstana. Alma-Ata, Kazsel'khozgiz, 1962. 325 p.
(Kazakhstan--Agriculture--Economic aspects) (MIRA 16:3)

SHAKHOV, A.A.; KAPLINA, G.T.; YUSUPOV, M.

Presowing irradiation of seeds by pulsed concentrated light.
Agrobiologiya no.2:274-280 Mr-Apr '65. (MIRA 18:11)

1. Institut fiziologii rasteniy AN SSSR, Moskva, i Kazakhskiy
sel'skokhozyaystvennyy institut, Alma-Ata.

ZAGORYANSKIY, A.; KAPLINA, K.

Fiftieth anniversary of "Pravda." Mest.prom.i khud.promys.
3 no.5:8-9 My '62. (MIRA 15:6)

1. Redaktor gazety "Za obraztsovoye obsluzhivaniye" (for
Kaplina).

(Newspapers)

KATSNEL'SON, A.B., prof.; VOINOV, I.N.; KAPLINA, K.P.

USSR

Studies on the etiology and pathogenesis of herpetic diseases of
the eye. Vest.oft. no.3:61-67 My-Je '62. (MIRA 15:8)

1. Kafedra glaznykh bolezney (zav. - prof. A.B. Katsnel'son) i
kafedra mikrobiologii (zav. - doktor med.nauk L.Ya. Ebert)
Chelyabinskogo meditsinskogo instituta.
(EYE--DISEASES AND DEFECTS) (HERPES)

ZHDANOVICH, Ye.S.; CHEKMAREVA, I.B.; BAULINA, G.A.; KAPLINA, L.I.

Improved method for producing nicodin. Med. prom. 16 no.3:25 Nr '62.
(MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.
(NICOTINIC ACID)

RAZUVAYEV, G.A.; MITROFANOVA, Ye.V.; PETUKHOV, G.G.; KAPLINA, R.V.

Oxidation of triphenylaluminum. Zhur.ob.khim. 32
no.19:3454 0 '62. (MIRA 15:11)
(Aluminum) .(Radicals (Chemistry)) (Oxidation)

KAPLINA, T.N.

Certain characteristics of the erosion of coasts consisting of permanently frozen rocks. Trudy Okean.kom. 4:113-117 '59.
(MIRA 13:4)

1. Institut merslotovedeniya AN SSSR.
(Arctic regions--Beach erosion)

KAPLINA, T.N.

Characteristics of transportation processes on slopes in permafrost
regions. Vop. geog. no.46:185-198 '59. (MIRA 12:12)
(Frozen ground) (Erosion)

KAPLINA, T.N.

Certain forms of frost cracking in northeastern regions of
the U.S.S.R. Trudy Inst. mersl. AN SSSR 16:30-35 '60.
(MIRA 13:4)
(Russia, Northern--Frozen ground)

ZHIGAREV, L.A.; KAPLINA, T.N.

Solifluctional forms of relief in the northeast of the
U.S.S.R. Trudy Inst.merz1.AN SSSR 16:46-59 '60.
(Anadyr Range--Solifluction) (MIRA 13:4)

KAPLINA, T. N. Cand Geog Sci -- "Effect of cryogenic factors upon the processes of development of slopes." Mos, 1964 (Acad Sci USSR. Inst of Geog). (KL, 4-61, 188)

KAPLINA, Tat'yana Nikolayevna; KOREYSHA, M.M., otv. red.

[Cryogenic slope processes] Kriogennye sklonovye protsessy.
Moskva, Nauka, 1965. 294 p. (MIRA 18:9)

AUTHOR: Kaplina, Ye. G.

SOV/68-59-4-20/23

TITLE: In the Laboratory of the Moscow Coke-Gas Works
(Vlaboratorii Moskovskogo Koksogazovogo Zavoda)

PERIODICAL: Koks i Khimiya, 1959, Nr 4, pp 60-61 (USSR)

ABSTRACT: Recent development work carried out by the works laboratory is outlined. 1) The technology of production of colloidal sulphur was developed and introduced into normal operation. Sulphur paste from vacuo-filters of the arsenical-soda sulphur purification plant is diluted in a mixer with water to a concentration of 25% and passed into a centrifuge of intermittent action, where it is washed with technical water and then with a solution of alkali sulphide. 2) Production of cyclopentadiene - by distilling residues left after the removal of sulphur disulphide. 3) A number of schemes of operating ammonia-lime plant were tested. It was found that by maintaining the reactor and settling tank under pressure a more complete decomposition of ammonia salts and settling of gypsum can be obtained. 4) The efficiency of alkali washing

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SOV/68-59-4-20/23

In the Laboratory of the Moscow Coke-Gas Works
of raw benzole was tested with satisfactory results
and a scheme for continuous alkali washing of raw
benzole was proposed (no details).

Card 2/2

SOV/68-59-5-13/25

AUTHORS: Kaplina, Ye.G., Kolodyazhnyy, I.V. and Nagornyy, G.K.

TITLE: Experience in the Operation of an Ammonia-Lime Plant with an External Reactor (Opyt raboty ammiachno-izvestkovogo otdeleniya s vynosnym reaktorom)

PERIODICAL: Koks i khimiya, 1959, Nr 5, pp 34-38 (USSR)

ABSTRACT: Difficulties encountered in operating the ammonia-lime plant with an external reactor and settling tank and their solution are described. The main difficulty was the precipitation of calcium sulphate in the second distillation column. To prevent this the temperature in the reactor and settling tank was increased (by 2-3 °C above the temperature in the column) by increasing the pressure under which they were operating. In addition the outlet of the mixture of liquor and lime from the reactor into the settling tank was made from the upper part of the reactor (Fig 4) which maintained a constant level of the mixture in the reactor and secured a

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SOV/68-59-5-13/25
Experience in the Operation of an Ammonia-Lime Plant with an
External Reactor

higher degree of decomposition of combined ammonia salts.
There are 4 figures and 1 table.

ASSOCIATION: Moskovskiy Koksogazovyy zavod (Moscow Coke-Gas Works)

Card 2/2

LEVIKOV, P.M.; KAPLINA, Ye.G.; POLANUYER, O.G.

Coke-chemical dicyclopentadiene. Koks i khim. no.11:43-47 '61.
(MIRA 15:1)

1. Moskovskiy koksogazovyy zavod.
(Dicyclopentadiene) (Coke industry--By-products)

LEBEDEVA, G.N.; BURMISTRENKO, L.A.; KOLODYAZHNYI, I.V.; KAPLINA, Ye.G.;
POLANUYER, O.G.; KULIK, I.P.

Recovery of pure ammonium sulfate in case of processes using
Glover acid. Koks i khim. no.9:42-45 '63. (MIRA 16:9)

1. Vostochnyy uglekhimicheskiy institut (for Lebedeva, Burmistrenko).
2. Moskovskiy koksogazovyy zavod (for Kolodyazhnyy, Kaplina,
Polanuyer, Kulik).

(Ammonium sulfata)
(Coke industry—Equipment and supplies)

KAPLINA, Z.I.

PA 246T22

USSR/Medicine - Gas Gangrene

Feb 53

"Modifiability of B. perfringens," L.A. Chernaya,
Z.I. Kaplina, L.G. Kovtunovich, L'vov Inst of
Epidemiol and Microbiol

"Zhur Mikrobiol, Epidemiol, i Immunobiol" No 2,
pp 76-78

By modifying the carbohydrate nutrition, stable
variants of avirulent and atoxic strains of B.
perfringens were obtained.

246T22

CHERNAYA, L.A.; SAMOENKINA, Ye.N.; KAPLINA, Z.I.

Effect of antitoxic serum in experimental tetanus. Zhur.mikrobiol.
epid.i immun. no.8:53-58 Ag '54. (MLRA 7:9)

1. Iz L'vovskogo instituta epidemiologii, mikrobiologii i gigiyeny.
(TETANUS, experimental,
eff. of immune serum)
(IMMUNE SERUMS, effects,
on exper. tetanus)

17(2)

SOV/16-59-6-34/46

AUTHORS: Chernaya, L.A., Shablovskaya, Ye.A., Kovtunovich, L.G. and Kaplina, Z.I.

TITLE: The Variation of Clostridium Perfringens. II. The Variation of Clostridium perfringens During Prolonged Existence in the Body With Experimental Dormant Gas Gangrene Infection. Author's Summary.

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1959, Nr 6, pp 127-128 (USSR)

ABSTRACT: A study was made of the variation of Clostridium perfringens in the conditions of a dormant gas gangrene infection. The foci of the dormant infection were created in guinea pigs and white mice by administering the corresponding microbes in lanoline. At regular intervals bacteria were isolated and tested for variation. The tests revealed three types of bacterium: 1) typical bacteria in the S form; 2) bacteria with changed cultural, morphological and tinctorial properties and 3) bacteria with very pronounced changes in their properties (in extreme cases their virulency and toxigenicity could not be restored even by repeated passages in animals). In the first month 75% of the strains isolated were of Type I. In the 4-6th month 31.8% were of type III and only 8.9 - 10.9% of Type I. In the 7-12th month 47.8% of the strains were of Type III. Poly-

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SOV/16-59-6-34/46

The Variation of Clostridium Perfringens. II. The Variation of Clostridium Perfringens During Prolonged Existence in the Body With Experimental Dormant Gas Gangrene Infection. Author's Summary.

infection in conjunction with Staphylococci or Salmonella paratyphi C and D led to more pronounced and frequent variation than mono-infection with Clostridium perfringens alone (72.6% compared to 42.2%). No changes in the antigen structure of the varied strains was noted, although their agglutination reaction titer was one step higher than that of the original Clostridium perfringens serum. The tests showed, then, that prolonged existence of Clostridium perfringens in the body during dormant gas gangrene infection led to a weakening of all the bacterium's properties, but particularly its virulency and toxigenicity. In most cases, however, pathogenicity could be restored by passages through animals.

ASSOCIATION: L'vovskiy institut epidemiologii, mikrobiologii i gigiyeny (L'vov Institute of Epidemiology, Microbiology and Hygiene)

SUBMITTED: February 10, 1958

Card 2/2

KAPLINSKAYA, A.I., assistant

Treatment of slowly developing forms of rheumatic polyarthritiis
with ultraviolet rays in combination with salicylates. Sbor.
trud. Kursk. gos. med. inst. no.13:391-395 '58. (MIRA 14:3)

1. Iz kliniki propedevtiki vnutrennikh bolezney (zav. - prof.
M.A. Cherkasskiy) Kurskogo gosudarstvennogo meditsinskogo instituta.
(ARTHRITIS) (ULTRAVIOLET RAYS—THERAPEUTIC USE)
(SALICYLATES)

GAL'PERIN, V.M.; KAPLINSKAYA, E.Z.; PAITA, R.S.; ULITSKIY, L.I.

Trends in the development of gas supply and distribution in
Siberia. Gas.prom. 4 no.5:20-26 My '59. (MIRA 12:7)
(Siberia--Gas distribution)

GOL'TSMAN, M.I.; FROLOV, V.V.; PINUS, N.Z., red.; KAPLINSKAYA, L.B., red.;
DROZHZHINA, L.P., tekhn.red.

[Structural characteristics of the atmosphere over the Arctic;
results of the Flying Meteorological Observatory] Strukturnye
karakteristiki atmosfery nad Arktikoi; rezul'taty rabot letaiushchei
meteorologicheskoi observatorii. Leningrad, Izd-vo "Morskoi Transport,"
1960. 147 p. (Leningrad. Arkticheskii nauchno-issledovatel'skii
institut. Trudy, no.238). (MIRA 14:1)
(Arctic regions--Meteorology--Observations)

MAKSIMOV, I.V., prof., doktor geograf.nauk, red.; KAPLINSKAYA, L.G.,
red.; KOTLYAKOVA, O.I., tekhn.red.

[Materials of the Soviet Antarctic Expedition, 1955-] Materialy
Sovetskoi antarkticheskoi ekspeditsii, 1955- . Leningrad, Izd-vo
"Morskoi transport." Vol.5. [Second sea expedition of the
diesel-electric ship "Ob'," 1956-1957; general description and
scientific results] Vtoraya morskaya ekspeditsiya na d/e "Ob',"
1956-1957 gg.; obshchee opisanie i nauchnye rezul'taty. Pod red.
I.V.Maksimova. 1959. 175 p. (MIRA 14:2)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955- . 2. Rukovo-
ditel' Vtoroy morskoy antarkticheskoy ekspeditsiyey na d/e "Ob'"
(for Maksimov).

(Antarctic regions--Russian exploration)

DOLGANOV, L.V., kand.geograf.nauk, red.; KAPLINSKAYA, L.G., red.;
DROZHZHINA, L.P., tekhn.red.

[Second Continental Expedition of 1956-1958; observation materials]
Vtoraya kontinental'naya ekspeditsiya 1956-1958 gg.; materialy
nabliudeni. Pod red. L.V.Dolganova. Leningrad, Izd-vo "Morskoi
transport," 1960. 600 p. (Sovetskaya antarkticheskaya ekspeditsiya,
no.13). (MIRA 13:9)

1. Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledova-
tel'skiy institut.

(Antarctic regions--Meteorology--Observations)

LEBEDEV, Vladimir L'vovich, kand. geogr. nauk; OSTREKIN, Mikhail Yemel'yanovich, kand. geogr. nauk, red.; TOLSTIKOV, Yevgeniy Ivanovich, kand. geogr. nauk, red.; KAPLINSKAYA, L.G., red.; KOTLYAKOVA, O.I., tekhn. red.

[Transactions of the Soviet Antarctic Expedition]Trudy Sovetskoy antarkticheskoy ekspeditsii]Leningrad, Izd-vo "Morskoi transport." Vol.16.[Third continental expedition, 1957-1959; general description and scientific results]Tret'ia kontinental'naia ekspeditsiia, 1957-1959 gg; obshchee opisanie i nauchnye rezul'taty. Pod red. M.E.Ostrekina i E.I.Tolstikova. 1962. 327 p. (MIRA 15:9)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955-. 2. Nachal'nik Tret'yey kontinental'noy ekspeditsii, 1955- (for Tolstikov). (Antarctic regions--Geophysical research)

DRALKIN, A.G., red.; KAPLINSKAYA, L.G., red.; KOTLYAKOVA, O.I.,
tekhn.red.

[Transactions of the Soviet Antarctic Expedition] Trudy
Sovetskoi antarkticheskoy ekspeditsii, 1955. Leningrad,
Izd-vo "Morskoi transport." Vol.26. [Fourth Continental
Expedition, 1958-1960] Chatvertaia kontinental'naia ekspeditsiia 1958-1960 gg.; obshchee opisanie i nauchnye rezul'taty. 1963. 258 p. (MIRA 16:9)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955-.
(Antarctic regions—Russian exploration)

KAPLINSKAYA, M.Yu., inzh.

Choice of the neutral conductor in lighting networks with
fluorescent and DRL-type lamps. Svetotekhnika 8 no.5:24
My '62. (MIRA 15:6)

1. Gosudarstvennyy proyektnyy institut po proyektirovaniyu
predpriyatiy elektropromyshlennosti.
(Electric networks) (Fluorescent lighting)

LEYSHMAN, M.B.; BALASHOV, M.Ye.; AFANAS'YEV, A.S.; MIKHELEV, V.M.;
TAKHVANOV, G.I.; SHKHALAKHOV, Yu.Sh.; SANNIKOV, Yu.I.; SLAVIN, A.A.;
BEYRAKH, Z.Ya.; KAPLINSKIY, B.I.; ORLOV, O.A.; PEVZNER, V.V.;
VALOV, O.V.; KIREYEV, V.V.

Inventions. Avtom. i prib. no.3:76-77 J1-S '64.

(MIRA 18:3)

L 07006-67 EWT(d)/EWT(m)/EWP(k)/EWP(h)/EWP(l)/EWP(v) DJ/GD

ACC NR: AT6021731

SOURCE CODE: UR/0000/66/000/000/0089/0095

70
69
BT1

AUTHOR: Kaplinskiy, B. I.

ORG: none

TITLE: "Kristall" combined automatic control system

SOURCE: AN SSSR. Institut avtomatiki i telemekhaniki. Pnevmoavtomatika (Pneumatic automation). Moscow, Izd-vo Nauka, 1966, 89-95

TOPIC TAGS: automatic control system, hydraulic device, hydraulic equipment, pneumatic control, pneumatic device, automatic pneumatic control, electric motor

ABSTRACT: Three versions of an industrial automatic control system were designed to satisfy the demand for simple electrohydraulic, electropneumatic, and electromechanical reliable controllers. The block diagrams of these systems are shown in figure 1. Electrical signals from transducers 1 are fed into the measuring system 2 of the transistor amplifier. The amplifier generates either dc output or ac output. Feedback 10 and command signals 3 are summed at the input of the amplifier with transducer signals and an error signal is generated. The output voltage of amplifier 4, through control selector 5 (which permits remote operation from the remote control 6) actuates electrohydraulic converter 7, the magnetic amplifier 8, or electropneumatic converter 9. In electrohydraulic system A and electromechanical system B, position feedback is derived

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L 07886-67

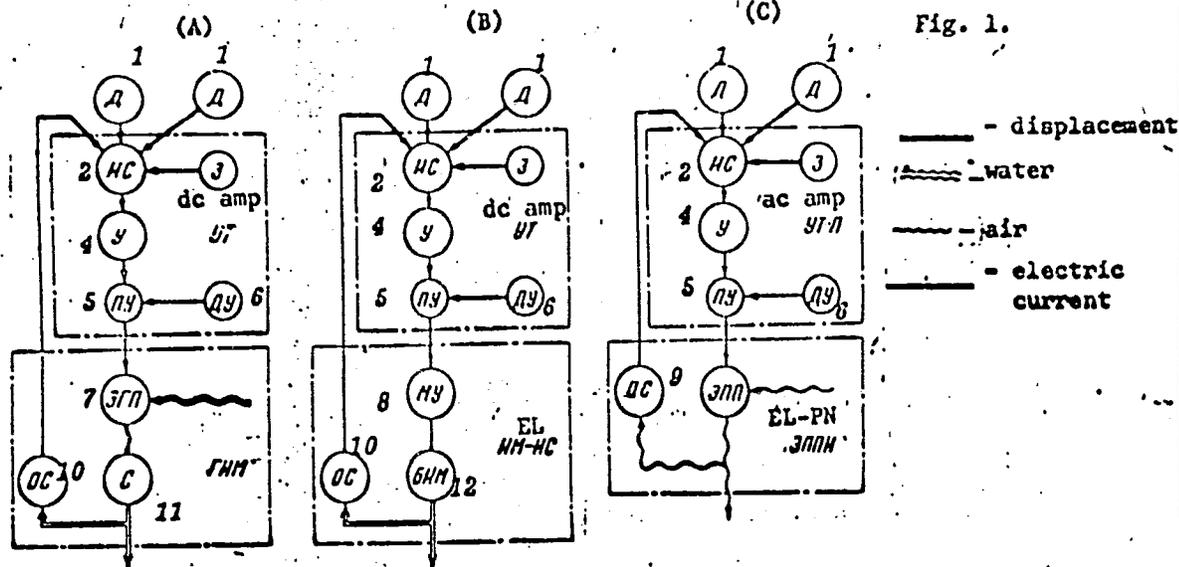
ACC NR: AT6021731

from the hydraulic servomotor 11, or the contactless prime mover 12 whereas in electro-pneumatic system C, the feedback is proportional to the air pressure at the output of the electropneumatic converter 9. The dotted lines indicate the structural units in these systems. Transistorized amplifiers are designed to accept multiple inputs from the linear variable differential transformers and resistance and thermocouple thermometers. In the electropneumatic system, a two-phase servomotor responds to the ac error-signal from the amplifier, and actuates a servovalve. The valve regulates the output air-pressure. A pressure transducer in the output line provides feedback ac signal through a linear variable differential transformer. A pair of differentially connected electromagnets actuate a servovalve in the electrohydraulic system in response to the dc error signals. Water pressure is increased or decreased in the forward or back portion of the hydraulic cylinder which causes the piston to move accordingly. A differential pressure transducer actuates the cores of a linear variable differential transformer, generating a position feedback signal. In the electromechanical system, a magnetic amplifier is used to drive a two-phase power servomotor. The author contends that the "Kristall" system is simpler, superior in performance and reliability, and cheaper than the existing modular logic systems. Orig. art. has: 6 figures.

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ACC NR: AT6021731



SUB CODE: 09,13,14/

SUBM DATE: 03Feb66

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S/114/61/000/004/004/006
E194/E435

AUTHORS: Pisarenko, G.S., Corresponding Member AS UkrSSR,
Troshchenko, V.T., Candidate of Technical Sciences,
Kaplinskiy, L.A., Engineer and Gryaznov, B.A., Engineer

TITLE: An Investigation of the Fatigue Strength of Steel
1X13 (1Kh13) in Variable Bending With Static Tension

PERIODICAL: Energomashinostroyeniye, 1961, No.4, pp.29-31

TEXT: Analysis of turbine blade breakages shows that they are mostly due to fatigue. In most laboratory fatigue tests certain factors are not allowed for, including the presence under service conditions of appreciable tensile stresses due to centrifugal force. The present work describes an investigation of the influence on the fatigue strength of steel 1Kh13 in bending of a constant tensile stress which imitated the influence of centrifugal force. The tests were carried out at temperatures of 100 and 400°C on steel 1Kh13 with different kinds of heat treatment. The specimen geometry is shown in Fig.1. The heat treatment and the mechanical properties of the material is shown in table 1, where the second column gives the heat treatment

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S/114/61/000/004/004/006

An Investigation of the Fatigue ... E194/E435

conditions, the third column the test temperature and the last column gives the hardness. In each case the first stage of heat treatment is hardening for 1000°C at 2 hours and the different kinds of tempering are: (1) at 420°C for two hours; (2) at 720°C for two hours and (3) at 760°C for two hours. The tests were made on a fatigue machine type ~~HS~~ (NU) with a device for the application of static tension. The equipment was calibrated with two resistance strain gauges and graphs were plotted of the relationship between the bending stress in the specimen and the applied load for several values of static stress. The frequency of load application was 50 c/s. The specimen was heated by a resistance furnace. The instrumentation is briefly described. For the various heat treatments described above, Table 2 gives the test temperature and the tensile stresses (mean stresses over the cycle in kg/mm²). The test results are plotted in Fig.2 and 3: Fig.2 corresponding to heat treatment conditions (1), curves (a) at 100°C and (b) at 400°C; Fig.3 to tests at 100°C on (a) heat treatment conditions (2) and (b) heat treatment conditions (3). Table 3 gives the fatigue limits found for the various materials.

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E194/E435

The results are best presented in the form of graphs in coordinates of the mean stress in the cycle and the amplitude value of the fatigue limit. A diagram of this kind is plotted in Fig.4 for test results at 100°C. The numbers on the curves correspond to the different heat treatments. The test results show that the mean stress of a cycle within the range of investigation has no influence on the fatigue limit in bending of steel 1Kh13 when the tempering temperature is low and the yield point and ultimate strength are high. On the other hand, for the same steel deeply tempered to be of lower strength and greater plasticity, the fatigue limit is greatly reduced by increasing the maximum stress. In the absence of static loading the ratio of the fatigue limit to the ultimate strength for steel 1Kh13 is constant and does not depend on the heat treatment or test temperature, being 0.40 to 0.42. No appreciable difference was found between the fatigue limits of steel 1Kh13 at temperatures of 100 and 400°C. The work of M.F.Sichikov, Z.D.Vishnevetskiy and D.L.Ginberg (Ref.1) is discussed and the following main conclusions are drawn. The application of appreciable constant

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tensile stresses (up to 35 kg/mm²) during variable bending does not reduce the fatigue limit of specimens of the first batch of steel 1Kh13 of high strength characteristics. For example, for this batch the maximum stress corresponding to the fatigue limit is 80 kg/mm² which is 96% of the yield point at 100°C. No reduction in the fatigue limit was found for this batch of specimens at a temperature of 400°C. On the other hand, tests on samples of the same steel which had been tempered at a higher temperature to ensure greater plasticity though lower strength (second and third batches) revealed considerable reduction of fatigue limit (by 24%) during investigations with static stress. These results, combined with other published work, show that there is no single relationship between the strength of steels and their sensitivity to the mean stress of the cycle. The fatigue limit of steels of high ultimate strength often does not depend on the mean stress of the cycle and vice versa. The results may be understood if one takes into account the appreciable irreversible energy dispersion in the material which occurs in steel 1Kh13 tempered at a high temperature. M.A.Voropayev (Ref.9),

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S/114/61/000/004/004/006
E194/E435

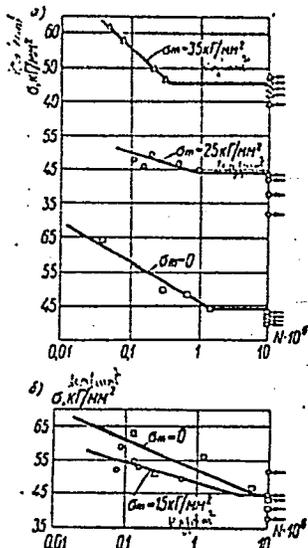


Fig. 2.

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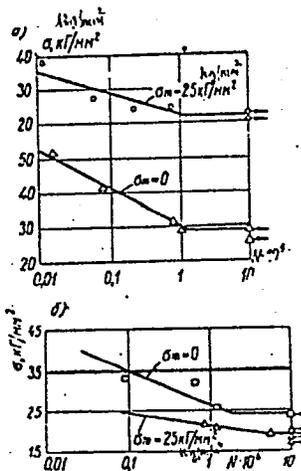


Fig. 3.